DOCUMENT RESUME

ED 343 766 RC 018 619

AUTHOR Nichols, Richard
TITLE Continuous Evaluation of Native Education Programs for American Indian and Alaska Native Students.
SPONS AGENCY Department of Education, Washington, DC. Indian Nations At Risk Task Force.
PUB DATE 91
NOTE 25p.; In: Indian Nations At Risk Task Force Commissioned Papers. See RC 018 612.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *American Indian Education; *Data Collection; Educational Testing; Elementary Secondary Education; *Evaluation Methods; Federal Programs; Participative Decision Making; *Program Evaluation; *Student Evaluation
IDENTIFIERS *Naturalistic Evaluation; Stakeholders

ABSTRACT

This paper examined the history and current issues in the evaluation of the education of Native students. Although public schools are the principal providers of services to Native students, most programs receive the greater part of their funding from the Federal Government and are subject to federal evaluation. Previous federal evaluation efforts have focused on efficiency and cost effectiveness rather than on overall effects and program responsiveness to parent perceptions of their children's needs. Also, despite various data collection and analysis efforts at federal, state, and local levels, a national database on Native education does not exist. Coordination of data collection efforts will depend, in part, on agreement about tests of academic achievement. The public school system's reliance on standardized testing may hurt Native students, as several factors can bias these tests against them. Some educators suggest other indicators of learning, such as assessment of skill mastery, student portfolios, and attitudinal measures. Providers, consumers, and monitors all "have a stake" in the continuous evaluation of Native education, but their evaluation needs differ. A naturalistic inquiry model of evaluation offers strategies that address the complex and culturally diverse realities and conflicting goals of Native education, and ensure that all stakeholders receive the information they need. These strategies rely heavily on information gathering and dissemination and include examination of each stakeholder group's views and interests, developing an understanding of different perspectives, consensus building, and negotiations. This paper contains 53 references. (SV)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED343760

Continuous Evaluation of Native Education Programs for American Indian and Alaska Native Students

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Richard Nichols
ORBIS Associates

Introduction

In the book, *Black Elk Speaks*, when Black Elk told John Neidhardt about how the sacred pipe was brought to the Dakotas by White Buffalo Calf woman, he finishes his story by saying "this they tell, and whether it happened so or not I do not know; but if you think about it you can see that it is true."

There are many things that we as Native people see as self-evident. Much of this is gained as cumulative knowledge within a people. However, it is often difficult to convince non-Natives of the truth of such beliefs and perspectives and we Native people end up getting sidetracked from believing into trying to prove that which we believe in. The history of federal education policy is full of examples of changing beliefs about the *best* way to educate American Indian and Alaska Native students. In the early decades of this century, the Progressive education movement's influence led to a federal Native education policy which promoted retention of Native cultures and a multicultural approach to education. This policy was congruent with a view of Native communities and governments as worthy of recognition in their own right. At mid-century, federal education policy had shifted to an assimilationist model and the goal of Native education was to get Native people into the American economic mainstream as quickly as possible. Throughout these shifts, the belief of Native people has been that education should integrate goals of both cultural sustenance and economic self-sufficiency. From a non-Native perspective, however, these goals have been viewed as incompatible. Using the term decentralization to denote efforts to ensure wider representation of and more responsiveness to legitimate interest groups (for our purposes, Native people), Weiler (1990) points out:

> The linkage between culture and learning tends to benefit from a more decentralized, disaggregated notion of learning and educational content...
>
> ...decentralizing the contexts and contents of learning as a means to recognize the diversity and importance of different cultural environments in one society is generally considered meaningful and valid. At the same time, however, it encounters the conflicting claims for a kind of learning that is less geared to the specifics of cultural contexts and more to the national...universalities of dealing with modern systems of technology and communication. (p. 439)

The role that evaluation plays in determining federal education policy is also critical. As Weiler notes:

> [Regarding] the relationship between decentralization and evaluation...I am arguing that this relationship is problematic for three different, but interrelated reasons... These reasons are: (a) modern pluralist societies increasingly face a lack of consensus on the objectives of education and hence on the criteria for evaluating the performance of educational systems; (b) there is...a very close linkage between evaluation and control, which is difficult to reconcile with the basic premises of decentralization; and (c) evaluation tends to be seen and used as a means of compensatory legitimation in its own right, that is, more for its legitimating than for its informative capacity. (p. 442)

For Native people--students, parents, and Elders alike--evaluation studies have become tiresome exercises. Hence the "not another study" syndrome. Evaluation can provide dismal statistics about the failure of Native students to *achieve* as well as non-Native students. Or evaluation can provide information on how American schools fail their Native students. The choice of which evaluation model to use in determining federal education policy today is particularly important since most Native students are enrolled in public schools, which themselves are undergoing critical review and reform.

RC 019619

BEST COPY AVAILABLE

This paper was developed based on the review of data generated from the Indian Nations At Risk (INAR) Task Force hearings across the country as well as on a literature review focused on evaluation studies either dealing specifically with the education of American Indian and Alaska Native students or which included Native students as part of the sample of students. The INAR hearing record itself is compelling and, as noted in the INAR summary -- *Open Discussion with NACIE and Task Force Members*, "the testimony from Indian people must be heard and taken in all sincerity" (p. 3).

The purpose of this paper is to present and discuss strategies for effective continuous evaluation of the education of Native students. These strategies are intended as plans for systemic reform in order to establish ongoing evaluation systems. As a backdrop to this analysis, we need to first identify the systems responsible for delivery of educational services to Native students. These are:

- The Federal government which is responsible for Bureau of Indian Affairs (BIA) funded schools through the Department of the Interior, as well as supplemental education programs funded through the Department of Education;
- The state education agencies and local public school districts which now have responsibility for educating the majority of Native students;
- Native governments which may operate their own schools, education programs, and/or tribal colleges; and which also have a responsibility to advocate for their constituents in dealing with other governmental bodies.

A primary task in this paper is to identify issues regarding the evaluation of the education of Native students. The hearing record of the INAR Task Force has noted that while there are various individual data collection/analysis efforts occurring at the national, state, tribal, and local levels, a national database on Native education is sorely lacking and must be established. This paper will also discuss what data and data collection systems do currently exist as well as how state and local education agencies and Native governments might coordinate data collection efforts in order to facilitate development of a national Native education database. When considering such a data base, it is also important that we (1) look at what measures, e.g., standardized test scores, are currently being used to assess Native student achievement (2) determine the appropriateness of these measures; and, if current measures are not appropriate, then (3) suggest potential systemic indicators of performance.

Another task of this paper is to identify the various groups which "have a stake" in the continuous evaluation of Native education. The evaluation needs of these various stakeholders can and do differ. We need to ensure that the data promoted by any evaluation are meaningful to all stakeholders.

Finally, it is important to identify the elements of an evaluation model that would be responsive to the needs seen within Native education. Not all evaluation models contain mechanisms for yielding appropriate, practical and timely information. As witnessed in the INAR hearings, an evaluation model must offer Native people strategic information designed to promote success in education, not to simply document failure.

Furthermore, the evaluation process must allow for participation of the various stakeholder groups. Finally, in recommending how to implement strategies for continuous evaluation of Native education, it is important to state these strategies as practical actions to be taken by each stakeholder group.

This final point regarding practicality is central to our discussion and formulation of evaluation strategies. Whatever policies develop from the INAR report, they must focus on the greater impracticality of keeping Native people undereducated and uninvolved in American's future. As Native peoples, we have much to give this nation in terms of cultural and social benefits.

Evaluation and Federal Education Programs

The role that evaluation plays in regard to federal education policy is an especially pertinent area to review here since much of Native education, as a distinct pedagogy, involves federal funding. This is not to ignore the fact that public schools are the principal providers of educational services to the vast majority of Native students. However, as the testimony throughout the INAR hearings has evidenced, Native parents have very little input into policy matters at the local level although much of what happens regarding Native education is directly related to programmatic policy concerned with federally funded programs, like the Indian Education Act (IEA) formula grant programs, which are administered by public schools.

House (1980) describes how federal educational evaluation policy evolved. In 1965, when Senator

Robert Kennedy pushed for an evaluation proviso to the Title I (compensatory education) program, this requirement was added to ensure that schools use the new federal funds to good advantage and thus, evaluation reporting was meant to assure that schools were responsive to parents' perceptions about what their children needed. Unfortunately, the passage of the Elementary and Secondary Education Act, of which Title I was a part, also coincided with the introduction of Planning Programming and Budgeting System (PPBS), a systems analysis mode which had been used extensively in the Pentagon, and was now applied to a wider array of federal programs including education. Thus, while Kennedy's intent was to use evaluation to assure that schools would be *responsive* to poor parents, evaluation as eventually implemented with Title I was used instead as a way to identify the most *efficient* approaches to educating disadvantaged students. Because of the evaluation requirements of the PPBS model, the implementation of Title I became an exercise in "developing programs that could be stated, measured, and evaluated in cost benefit terms" (p. 200). The model assumed that evaluation should be used to logically examine how a set of inputs, e.g. money or instructional strategies, was linked to a set of outputs, e.g. standardized test scores, and that this linkage was for the purpose of defining the most efficient system of education service delivery. In other words, evaluation became viewed solely as a way to measure the production function of these federal education programs.

The results of the first few years of Title I evaluations did not please the federal program staff under the Assistant Secretary for Program Evaluation (ASPE). They felt that the evaluations did not yield any common output measures to facilitate cost-benefit analysis. However, the evaluations, which were conducted locally, were almost all positive. ASPE then commissioned a study for the express purpose of examining what amount of resources yields what quantity of gain in a specific test score. That study, however, did not discover gains in test scores. Feeling that the problem was in the data supplied by the schools, ASPE then embarked on its own data collection and the Title I national surveys were commenced. However, the 1968 national survey showed no gains in test scores and the 1969 survey results were never made public (House, 1980).

ASPE then moved to centralize more control over program inputs and design as well as evaluation. Furthermore, *planned variation*, i.e. the systemic introduction of different input and output measures, were introduced. The Follow Through program was one of the first federal education programs to undergo planned variation and to use other "experimental design" concepts. Specifically, the use of control groups was introduced into the evaluation of the Follow Through program. The only evaluation information ASPE felt was worthy of consideration was that which focused on the production function, and the only evaluation models ASPE felt were worthy of consideration were those that used experimental methods and statistical techniques. The use of sponsors, i.e., specialists with special instructional models, was also introduced to the Follow Through program.

From 1968 through 1977, work on the Follow Through program evaluation continued. The first evaluators, Stanford Research Institute (SRI) initially stated that a broad array of evaluation criteria would be used including, among many other broader social measures, parental involvement/attitudes, comparisons of cognitive and affective development, and responsiveness to low-income children and parents.

Despite SRI's initial statements, however, from 1968-1971, only cognitive tests were administered. Each year, annual Follow Through meetings erupted with protests from community groups and sponsors who were satisfied that the programs were successfully meeting local needs. These protests were directed against the evaluators' bias in looking solely at the production function and the evaluators' use of what community groups and sponsors considered biased indicators. After spending $12 million by 1971, the evaluations had found no positive Follow Through effects. Several ASPE staff resigned, new staff were appointed and a new evaluation directive was initiated.

From 1972-73, while SRI continued the data collection, the Huron Institute was contracted to draw the evaluation sample, Abt Associates was contracted to conduct the data analysis, and a federally appointed panel was given the task of selecting the evaluation instruments. Two cognitive measures, the Metropolitan Achievement Test (MAT) and the Raven's Colored Progressive Matrices test were chosen and, despite the fact that the panel felt that no adequate noncognitive measures existed, two noncognitive tests were chosen for use, namely, the Intellectual Achievement Responsibility Scale and the Coopersmith Self-esteem Inventory.

The following year, the annual Follow Through meetings again erupted in discord. House (1980) reports that parents, feeling that they had no role in decision-making about the program, wrote:

> We are tired of others deciding when a program is 'not good' or 'good' for us based on

> their concept of 'data' and their concept of what is 'wrong' with our children and what is needed to correct these 'wrongs.' ...The burden of being able to measure the kind of program we want should be that of the experts -- rather than to design a program that they know how to measure. (p. 28)

The sponsors also wrote a document in support of the parents' concerns. Although this flare-up was similar to the previous meeting, the earlier meeting had produced some immediate, if temporary, changes. This time there were no attempts to address the criticisms. The national evaluation of federal education programs was by now completely isolated from stakeholder politics. This was the last annual general Follow Through meeting (House, 1980).

The next round of evaluation battles in federal evaluation shifted to Head Start. From 1974-1977, the Head Start evaluation, designed by Abt Associates, also proceeded as "impact" studies, based on the assumption that the effect of a program can be judged by its impact on students' tests scores. Although no difference was found between Head Start and non-Head Start classes, the push for a broader array of social indicators or for the use of qualitative data in the evaluation of federal education programs was essentially quashed. In 1974, the top federal official in charge of education evaluation noted that "if we find that parents and kids are enthusiastic but the evidence is anecdotal...it would be irresponsible for us to tell other communities to consider the model" (Report of Fourth Annual Follow Through Working Conference, 1974, in House, 1980, p. 210). Thereafter, educational evaluation models at the federal level became focused mostly on efficiency concerns.

All in all, both the evaluation policy at the national level, based on a systems analysis approach, and its focus on efficiency concerns have been seriously challenged by educational researchers. The prospect of finding the most cost-effective or efficient model for providing educational change is not as easy as identifying simple inputs and outputs. There are entirely too many other variables that affect education. Furthermore, as the field of evaluation has developed, the reliance on experimental design concepts or on a *hard science* paradigm of evaluation has also been challenged.

In terms of rendering more useful, practical and/or *true* evaluation data, the use of more participatory models of education has been advocated by many evaluation researchers. These researchers include Yvonna Lincoln and Egon Guba, whose model for "naturalistic inquiry" is proposed in this paper as an appropriate model for the continuous evaluation of Native education.

In analyzing what went wrong with the Follow Through evaluations, House (1980) points out the discrepancy between the various stakeholders involved in the program. Two stakeholder groups, parents and sponsors, sought to push evaluation back to assessing the broad set of social goals (e.g., greater responsiveness on the part of the schools to the concerns of low-income parents) that Follow Through sought to accomplish. On the other hand, the other stakeholder group, the then Office of Education, sought to reduce the program outcomes to a few common quantitative measures in which comparisons of program sites could be made. Thus, the goal of the evaluation of the Follow Through program changed from focusing on determining the overall effects of the program to only determining which model gave the most effect for a particular cost. This means-ends reasoning combined with the ends -- test score gains -- expected by the federal agency led to what is called technical rationality. This type of thinking assumes that "rationality consists of lining up clearly defined alternatives and choosing among them in terms of their effect on the particular objective one has in mind" (House, p. 212).

The evaluations of many federally funded education programs fall into this type of rationality, when in fact the goals of the education programs may be much broader than the measures themselves indicate. For example, the IEA formula grant program which was/is authorized to impel Native community control in partnerships with public school officials for Part A formula grants and meet the special educational and culturally related academic needs of Native students was evaluated in the early 1980's through an impact evaluation. Based on data from a sample of 115 projects, this Impact Evaluation of IEA Part A Programs initially viewed standardized achievement test data as a major indicator of the impact of the formula grant program on academic achievement. However, after a thorough review of relevant research and discussions with testing/evaluation experts, the evaluators (Development Associates) deemed as inappropriate the use of achievement test data as an impact measure. A mega-analysis of Indian student achievement test data from several studies over the preceding 40 years had shown that there had steadily been a significant improvement in test scores since the late 1960's. Furthermore, by the time the "Part A" impact evaluation was conducted, test scores of Native students had already risen to their highest level in over a decade, although they were still

below the national norm. Thus, the evaluators could not directly attribute this progress to the IEA formula grant program. They did, however, note that the program "may [in part] have contributed to the increase" (National Evaluation of Indian Education Act Part A Projects, Department of Education, 1983).

This impact study used a broad array of other impact measures, including school attendance, and student self-esteem and attitudes toward school. The study also concluded that nationally, school attendance of Native students no longer seemed to be a serious problem and that Native students' attitudes toward school and themselves were also quite positive. The report also claimed that Native parents were more involved than ever before in public schools and that parents seemed to be *reasonably supportive* of the education the public schools were providing their children. The report noted that the data also suggested that the climate in public schools with respect to Native children was considerably more benign than reported 15 years earlier. Except for drop out rates of Native students, the data showed *marked change* since before the IEA formula grant program began, although these impacts could not be directly attributable to this program or the other programs serving Native students. While noting that *the overall objectives of Congress in enacting the Part A Program are being achieved,* the study found that continuing problems existed. Specifically:

> (1) achievement test scores are not universally positive;
>
> (2) while relations between the schools and Indian community are generally neutral to positive, this is not true everywhere;
>
> (3) the sensitivity of school administrators continues to be viewed as a problem by Indian parents and community leaders in up to 30% of the LEAs; and
>
> (4) test score results for some groups of Indians students are considerably below the norm. (Nichols, 1984)

In general the study was not very conclusive. One criticism of the study that this author had was that the IEA legislation used a considerably expanded definition of "Indian," thus covering students who had, in many cases, not been included in the samples used for previous Native education studies. Thus, by including Native students (and parents) who were in many cases more *mainstream* than those in the earlier studies, the IEA program data could consequently result in a trend toward the norm that might easily be misinterpreted as improvement of student performance. This concern, I felt, was not addressed adequately in the IEA Part A impact evaluation, nor was it addressed or brought up in the INAR hearings. Nevertheless, I believe it is an issue which should be of significant concern in the continuous evaluation of Native education since it most definitely affects the congruency of evaluation findings about Native students over time. This concern is further substantiated by the recent 1990 census findings, which demonstrates that the federal government count of American Indians (including Aleut and Eskimos) has tripled since 1960, an increase that cannot simply be attributable to an increased Native birth rate. While the growth rate remained low in states which traditionally have had a Native population (12.59 percent in South Dakota, 33 percent in Arizona), the growth in Native population has been considerable in states in which Native populations prior to 1960, were small; to wit, in Alabama there was a 117.7 percent increase from 1980 to 1990, only one decade (New York Times, March 5, 1991).

The concern raised here is not with the legitimacy of the data or the legitimacy of those individuals who claim Indian heritage; rather the concern has to do with the need to take into consideration the changing nature of the sample(s) used in any data base for the continuous evaluation of Native education. Caution must be exercised to ensure that valid conclusions are drawn from any data that might be generated in the future.

Evaluation Issues

A recent Time magazine essay explained how political "theorists of the emerging world" have started sorting the world into categories labeled Old Paradigm and New Paradigm, with the 1990's being viewed as the boundary at which one age transforms into another. A paradigm is an example, a model, that helps us compare things, as in past and present. To be able to process information and solve problems, one must operate upon a set of assumptions. Thus, the paradigm we use to come up with new solutions must operate upon new and different assumptions. An essential element of this new thinking is the making of lists of what is old and what is new. In looking for new ways to explain the world in order to analyze problems and seek solutions, this New Paradigm-Old Paradigm game considers "what works (New Paradigm) and what doesn't work anymore (Old Paradigm)."

In this scheme of things, centralized bureaucracy and *big* government are the Old Paradigm. The New Paradigm, on the other hand, allows for programmatic flexibility, change and decentralization as well as access to decision-

making by the people affected. In this sense, the so-called New Paradigm in fact has commonalities with the thinking in the 1960's that gave rise to Community Action Programs meant to *empower* communities with previously little or no access to decision-making and power.

This New/Old Paradigm metaphor is a way of thinking about change and looking at what works, particularly as a basis for making decisions. This approach is especially important as we consider what has worked and what has not worked with respect to the education of Native students. It is somewhat reassuring to hear the author of the New Paradigm term, James Pinkerton, an assistant to President Bush, voice the opinion that "the conventional wisdom around Washington is that nothing works. [However,] Americans don't believe it."

Although much of the testimony from the INAR Task Force hearings focused on what has not worked for Native students, the hearings also provided information from concerned Native parents, Elders and educators about what (from their perspective) does work for themselves and their students.

It is important to keep in mind as evaluation is discussed in this paper that we must start to look at Native education not in terms of the Old Paradigm (centralized government, one organizing idealogy, one big idea, one big solution) but rather in terms of the New Paradigm — decentralized actions and pragmatic multifaceted strategies to determine what does work, why it works and how to share this information. In this sense, it is imperative that any recommended evaluation strategies focus not only on the national level, but also on how we can bring the very groups affected by Native education policies and programs — Native communities, tribes, Elders, parents and students — into the evaluation process.

A. Data Collection Efforts At The National Level Regarding Data Regarding Native Education

Since the *Meriam Report of 1928*, the need for a national database on Native education has been pointed out in virtually every study related to Native education. For instance, the 1969 Congressional report, *Indian Education: A National Tragedy — A National Challenge*, specifically noted that "One problem in evaluating the success of Federal programs for the American Indian is the extraordinary inadequacy of the statistics data presently available ... Without data, problems cannot be adequately understood or delineated and consequently are neglected" (p. 109). This report was issued over 20 years ago, yet its remarks remain disturbingly apropos for the 1990s.

This 1969 report recommended that the onus for developing and maintaining data on Native education performance be placed upon the BIA. Indeed, it was recommended that the BIA monitor Native student performance not only at BIA-funded schools, but also "make periodic checks of Indian performance data in public schools, and that data be reported to local and state school authorities, the Indian tribes or communities affected, and the U.S. Office of Education" (p. 135). The report also recommended that the BIA "should require improved evaluation components at the State and local levels ... Some uniform data collection techniques should be established ..." (p. 132). In other words, the need for a national database consisting of consistent data collected across states was again in 1969 deemed necessary.

Eleven years later, in 1980, the policy recommendations of the Education Commission of the States (ECS) demonstrated that a national database on Native education was still seen as necessary and that it also continued to remain largely nonexistent. The ECS report recommended that:

> ... state departments and boards of education and local boards recognize and consider the need to establish and maintain a standardized, centralized data collection system on Indian education. This data would be collected by local agencies and shared with Indian and non-Indian people involved with the education of Indian children. (*Indian Education*, Education Commission of the States, 1980)

The 1980 ECS report also recommended the creation, by Congress, of a "National Center for Indian Education" as a central point for the collection of information, including statistical data, on Native education. It was suggested that the Center have capabilities to provide technical assistance to "tribes, legislators, education policy makers, and others ..." (Ibid., p. 33).

In 1972, the National Advisory Council on Indian Education (NACIE) was established by specific legislation resulting from the 1969 study cited above. Given its mandate to oversee all federal education programs that benefit Native students, NACIE however, has not had sufficient opportunity nor resources for developing or maintaining an extensive database. In its *15th Annual Report to the United States Congress, Fiscal Year 1988*, NACIE reiterated the lack of adequate and consistent data to assist in fulfilling its oversight function. Specifically, noting that the responsibility for maintaining such a database should

logically be a part of the National Center for Education Statistics (NCES), NACIE pointed out:

> ...the need to work with the NCES, and the need to collect data from state education agencies with available statistics on Indian students. The Council must begin this and other projects which will provide ... the types of information needed to assess the educational needs of Indian and Alaska Native people. However, it is clear that the Administration and Congress must assist in this effort by directing the [NCES] to gather the types of information needed and providing NCES with the money to do the necessary surveys and by directing the Office of Indian Education [in the Department of Education] and [BIA] to gather information from all of their grantees, contractors, and BIA-operated schools. (NACIE, 1988, p. 30)

In its FY 1989 report, the NACIE further noted that its staff had again had to compile data from various sources and would continue to do so "until the National Center for Education Statistics ... or some other responsible entity assumes the collection of necessary information on [Native education]" (1989, p. 12). Noting the many agencies from which it had to elicit information, NACIE cautioned that these agencies "use different sampling methods for arriving at their computations, and comparing similar data from one agency with another is discouraged ..." (Ibid.).

Based on NACIE's statements, it appears that the NCES has been unresponsive to the efforts of Native educators and policy recommendations citing the need for a national Native education database. Although, in its High School and Beyond (HS&B) survey, the NCES was able to cite Native students data regarding the sophomore "cohort drop-out rate" it was able to do so only because the HS&B survey elicited a great deal of background information on individual students, thus enabling a significant sample of Native students (*Drop-out Rates in the United States: 1988*, NCES, p. 25).

Approximately 90 percent of Native students now attend public schools, which are directly provided Department of Education funds -- $54,276,000 in FY 1990 -- through a formula grant program specifically targeted only for Native students. Public schools on or near Indian reservations receive additional funding through the Federal Impact Aid Program; for these schools, in FY 1989, this amounted to $239,355,638 in maintenance and operations funds, and $7,681,000 in construction funds. In FY 1989, Native students in public schools benefitted from an additional $23,000,000 in funds under the Johnson O'Malley Program, which provides monies to states and school districts to provide services to Native students (Brescia, Commissioned Paper 4 of INAR Supplement Volume, 1991). The fact that so much federal funding is earmarked specifically for Native students -- not to mention that Native students in public schools comprise about five percent of the services recipients of the FY 1990 4.4 billion dollars in Chapter One funds -- there is certainly a compelling reason for the inclusion of Native students as a special subsample in *all* NCES data collection efforts. Yet, despite the logic of such an undertaking, these data are still not collected as a matter of policy by NCES.

Another study conducted by NCES, the National Education Longitudinal Study (NELS) of 1988, could have afforded an excellent opportunity to collect significant data on Native students. Nevertheless, this study represented simply one more instance where Native education, while not ignored, was benignly neglected. For instance, while the NELS specifically oversampled for students of Hispanic or of Asian or Pacific Islander origins, it did not attempt to do so for Native students. Furthermore, while both "regular" public and private schools were included among schools sampled, BIA schools were specifically, for some reason, excluded. The authors of the NELS:88 report, *A Profile of the American Eighth Grader*, note that "NELS:88 is a powerful vehicle for looking at at-risk issues" (p. v). However, the sample of Native students is small; thus, the authors note that while for most of the sampled populations inferences can be made from the data which are generally reliable, such is not the case "when estimates are made for relatively small subpopulations, such as for American Indians (N=315)" (Appendix B-5). It should be noted that the INAR staff has looked at how a specific subsample of Native students could be incorporated into the NELS sample; however, clearly that would be costly at this juncture.

In addition to the effort coordinated by the NACIE to collect national statistics on Native education from various federal agencies, the BIA began recently to report aggregate test scores and school performance data (it refers to them as "report cards") on BIA-funded schools, i.e., BIA operated schools as well as those schools operated by tribes through either contracts or grants from BIA. A total of 36 out of 180 BIA-funded schools were reviewed during the 1989-90 school year. These report cards are issued to tribes and Indian parents and are intended to assist these constituencies make informed choices on which school students should attend. This effort also involves the collection of alternative measures among a few BIA-funded schools (this effort is discussed in more

detail in the section of this paper dealing with potential systemic indicators).

Related to this effort, BIA has indicated it will establish a research and evaluation component in the Office of Indian Education Programs (OIEP) to measure the progress of "Indian students on Indian lands" in meeting or exceeding national norms by the year 2000 (Department of the Interior, Goal and Strategy for BIA Education, 1990). To monitor such progress, BIA will monitor each school every four years. The parameters of this effort are limited, however, since the monitoring will only account for those students in BIA-funded schools and not (1) those other Native students on or near reservations who attend public schools, much less (2) Native students who may be tribal members but live in non-rural, non-reservation settings and attend nearby public schools -- that is, the majority of Native students.

Given NCES' and BIA's stances, we are essentially left with only NACIE's effort to compile national level data on Native education as it is generated from a variety of sources. However, since NACIE cannot effectively deal with this task without substantial additional resources, it is imperative that NCES take on this data collection and analysis responsibility. The rationale of the special and unique relationship between Native governments and the U.S. government could certainly serve as justification within the Department of Education to undertake this effort to recognize the special needs of Native students.

B. Data Collection Efforts At The State And Local Levels Regarding Native Education

The question of what data collection and research efforts are occurring at state and local levels was never directly asked by the INAR Task Force at the hearings. However, the testimony delivered by a broad cross-section of tribal, state and public school district educational personnel did include some valuable data that could presumably be useful for both the U.S. Departments of Education and Interior. It seems clear, however, that there is very little effective coordination between state and Native governments and public schools with respect to their efforts to collect the necessary data on Native student performance. Nevertheless certain inferences about data collection efforts can be made from the testimony at the INAR hearings as well as from other documentation and research collected by the INAR Task Force.

In 1980, the following states had the highest proportion of Native students to other students: Alaska (20.6 percent), Montana (9.8 percent), Oklahoma (9.1 percent), New Mexico (7.8 percent), South Dakota (7.2 percent), and Arizona (4.1 percent). Most of these states have some office within the state education agency which has responsibility for coordination with the Native communities (Boyer, 1983). INAR hearings were held in each of these states, with the exceptions of New Mexico and South Dakota. Additionally, hearings were held in California, Minnesota, North Carolina and Washington.

With the exception of Montana and Washington, each of the states in which INAR hearings were held had at least one representative from the state education agency present testimony. With the exception of North Dakota which was adjacent to a state where hearings were held, no state in which hearings were not held sent representatives to the hearings. One can presume that this lack of greater state participation was in large part due to funding restrictions on out-of-state travel. It is noteworthy, however, that Alaska and Minnesota, in addition to the state education agency representatives, had representatives from their respective state legislatures at the hearings.

Those states represented at the hearings indicated that they collected some statistics on Native education although there were varying degrees of specificity among the witnesses as to the type of data collected and analyzed. In three instances, local school district or tribal representatives also alluded to state statistics, namely for Wisconsin, New Mexico and South Dakota, but provided no substantive descriptions of the type or breadth of the statistical data available.

Boyer (1983) states that "In addition to national school measures ... many states have assessments of their own ... [Many states — Iowa, California and Michigan are cited — require standardized achievement tests at certain grades; and] more than thirty states now require competency tests" (pp. 29-30). In general, the states that were represented at the hearings did not present any comprehensive data on Native student performance that were collected and reported on a regular basis by the state. This is not to say that such a practice may not occur, only that the hearings did not bring out this point.

In general, the information cited by the state education agency representatives pertained to specific, mostly recent, one-time studies of general state and/or Native education performance rather than to any on-going and institutionalized data collection efforts on Native students. For the most part these studies were either (1) one-time statewide assessments that included Natives as a

special population — such as *Helping Schools Succeed At Helping All Children Learn* (Alaska State Senate report, 1989) or (2) specific reports on Native education problems and policy recommendations — such as *Our Children, Our Future* (Minnesota Indian School Council report to the state legislature, 1989). It is noteworthy that these data collection efforts were usually instigated by specific state legislative actions. For example, Arizona, in 1983 and 1985, conducted a survey to help formulate an appropriate policy direction concerning the state's role in Indian education which resulted in *A Working Document on Indian Education* (1986). In 1988, North Carolina adopted an "Indian Education Policy" which led to the formation of a state advisory council on Native education. Minnesota similarly has a "Comprehensive Plan for Indian Education" (INAR Regional Hearings Reports).

One model for data collection is the TRACKS program in Montana. This program could serve as a potential model for other states since it represents a comprehensive statewide effort to gather information on Native education from kindergarten through the 12th grade, as well as on higher education. This Montana project grew out of original research conducted by Dull Knife Community College and the Northern Cheyenne Dropout Project. It is important to note the issues brought up by persons affiliated with these Montana efforts, regarding the collection, at both the state and local/tribal levels, of Native student performance data. The following statement outlines the concerns and observations regarding data collection at the tribal/local level made by the director of the Northern Cheyenne project:

> Upon receiving funding from OERI for my study, I began a lengthy process to determine the exact issues to address and data to collect. I worked cooperatively with the three schools serving most of the students on this reservation ... Each school expressed different concerns about the data collecting process, but they finally agreed on who would collect the data and how to manage issues of privacy.
>
> One critical aspect of my data collection process was the involvement of school personnel. ... Their involvement was ... beneficial for themselves as they learned a great deal about their own school and students, and as a result are very interested in the outcomes. I strongly urge that school personnel at all levels be involved in research endeavors.
>
> We collected kinds of information that were suggested by other studies on school completion and tried to determine whether students completed, transferred, or dropped out of schools. However, the definition of "drop out" is complicated because some students do not finish high school and others attend elsewhere. Because of the high rate of transfer among local schools, there was an underlying concern about transfer problems. We also collected data on student performance that included grade point average — overall and by subject, standardized test scores, and percentile ranking, to allow a comparison of measures. We reviewed student characteristics such as the number of days missed in high school, discipline problems, in and out of school suspensions, and which schools attended.
>
> We collected information on 698 students which represents three cohorts — the entire student population who would have graduated in 1987, 1988, and 1989, for all three schools. It is not a sample.
>
> ... Others [who testified] mentioned the need for good research but say this is too difficult or too expensive. This is not the case. The difficulty of this research comes from working with difficult issues and with concerns of confidentiality. I have been fortunate to work with ... a tribal community college ... located in the middle of the reservation. I had college students working on every aspect of the project: data entry, data collection, analyzing, and writing. Their input was essential to the research and they learned and contributed a lot.
>
> Moreover, it is important to conduct research at a local level. When you look at national studies like *High School and Beyond*, there are small representatives of Indians. It is important for local studies to compare to the national studies, and critique whether they represent Indians well. It is only with good local research that we can evaluate national studies and have an accurate perspective on their meaning. I recommend others to take on local research.
>
> The state is now interested in the project and its outcomes and has now initiated a TRACKS system, but our experience shows it can be done successfully at the local level. (Carol Ward, INAR High Plains Regional Hearing, August 20, 1990)

The director of the TRACKS program made the following observations about data collection issues at the state level:

> We need to put pressure on the Office of Public Instruction, universities, and tribes to get the information we need on the status of Indian education. Access to information

> equals power. (Ellen Swaney, INAR High Plains Hearing, August 1990)

In summary, the records of the INAR hearings bear out the fact that data collection efforts are to some degree (albeit at varying levels) occurring at the state, tribal and school district levels. Almost all individuals who testified were able to share at least some data on their constituent populations regarding educational performance. Based on the content of individual testimony, especially those from programs affiliated with universities, state universities seem to be able to collect and analyze information much more readily then other entities. Given this fact, perhaps special efforts should be made to coordinate efforts among universities, including tribal colleges, to lead this effort across states.

With respect to native governments that have undertaken comprehensive data collection efforts on Native education, it would appear that those that have done so have clearly seen the link between a good statistical demographic information base and economic development efforts. An example of tribal information gathering for this purpose are the Mississippi Band of Choctaw Indians' two publications, *Choctaw Education* (1979) and *The Choctaw School Study* (1985), both of which offer much information on methodological concerns at the local tribal level.

Local Indian organizations, particularly in urban areas, also were able to provide extensive information on Native education performance. Additionally, regional educational laboratories, funded by the Department of Education, can assist in coordinating data collection efforts among tribes, public schools, and states. Sahme (1990) has devised a "preliminary flow chart" for how this process could be structured.

The evidence collected through the INAR hearings suggests that data on Native education does exists to a greater degree than individual Native educators seem to believe. However, there is currently little effort being made among tribes, or local school districts and states with respect to coordination and consistency of data collection efforts. Moreover, there does not seem to be any interstate efforts for collecting such information. Furthermore, there is a lack of agreement on whose responsibility it is to coordinate these efforts and also take responsibility for analyzing and reporting data from these diverse efforts.

C. Standardized Tests And Native Student Performance

Standardized testing can be simply defined as the use of tests which (1) have the same or equivalent items meant to assign numerical values to samples of behaviors; (2) are administered using uniform directions and scoring methods; and (3) are usually interpreted through the development of norms for the group for which the test was developed.

There are generally four types of commercially available standardized tests which are most frequently used in educational placement and grading. Aiken (1976) defines these as:

- Achievement Tests. An achievement test is one that has been designed to measure the knowledge and skills accrued in a specific content area. The content areas are usually school subjects taught at a given grade level. Commercially available achievement tests are most frequently multiple choice, group-administered tests of content selected to apply to a wide range of school programs.
- Aptitude tests. An aptitude test is a test that has been designed to measure the capability of an individual to profit from instruction in a specific content area. An aptitude test is designed to measure skills, traits, and talents predictive of future performance in the area.
- Ability tests. An ability test is one deigned to measure the capability of one to perform in a content area. The difference between an ability test and an aptitude test is one of status; present capability versus potential capability.
- Intelligence tests. An intelligence test is one designed to measure an individual's ability to reason and perform verbally. The IQ test is a generalized form of aptitude test for scholastic work.

At all of the INAR hearings, the issue of usefulness and appropriateness of using scores from standardized tests, particularly achievement tests, for purposes of measuring Native students' academic performance elicited the most vociferously negative testimony. Rehyner (INAR Supplement Volume, Com. Paper 8) discusses how some of the changes — such as a strong reliance on standardized achievement tests — in the American school reform movement of the 1980's have hurt Native students. Breschia and Fortune (1988) also criticize the misuse of standardized achievement tests. Specifically:

> ... Achievement tests may be used in four ways to make decisions about [students:] as a survey of attainment in a content area, as a diagnostic instrument to identify the

> strengths and weaknesses of an individual in a content area, as a readiness indicator to determine if an individual has attained enough prerequisite material to continue study in a given content area, and as a performance test to estimate the degree of learning of a body of content defined by instruction.
>
> Generally, when standardized tests are used with American Indian students (on the reservation or in settings with low levels of acculturation) and produce invalid results, the tests usually produce lower or less desirable scores for the Indian test-taker. These score variations are not really explained by program related factors nor correlates of test performance which are frequently found in other situations.
>
> In program-related decisions the underestimation of Indian performance on ability tests may result in the development of an inefficient program design. Underestimation on achievement tests may result in the demise or modification of what in reality is an effective program. (p. 2)

In addition to these limitations to the use of standardized tests, several other factors can induce bias within such tests when used with Native students. These include language bias, whereby Native students, from non or substandard English prominent language families, may read questions or interpret an answer inaccurately. Native cultural values that do not stress competitive behaviors also can produce bias.

Despite concerns such as those stated above, standardized achievement tests are precisely the measures that many states and public schools rely upon to gauge academic success. Unfortunately for Native students, who are already affected by the cultural, income-level, and/or linguistic biases of these tests, there is now also a movement for competency testing at the national level. The education-focused newspaper, Education Week, recently reported that Educate America, Inc., is calling for the development of a "national achievement test for all high school seniors, [and plans] to ask Congress to fund it and make it mandatory for all students in public and private schools" (Education Week, February 6, 1991). Another article (Education Week, December 12, 1990) additionally reported that, two foundations, including the John D. and Catherine T. MacArthur Foundation, have provided grants to help launch work on a "national examination system" based upon the recommendations of groups such as the President's Educational Policy Advisory Committee. The article also notes that the National Center for Fair and Open Testing (commonly known as FairTest), the leading critic of standardized testing, has called these moves "a step backward at a time when states and school districts are developing more complex methods of measuring student performance."

That standardized tests are inherently culturally biased is generally agreed to based on the differences in performance across gender, racial, income, and ethnic lines: "white" males tending to score the highest. Although not touted as an achievement test but rather as an aptitude test, the SAT is the most commonly cited example of bias in standardized testing. The statement and chart below discusses relative SAT test scores along gender and racial/ethnic lines:

> Many students face multiple biases on the SAT. Black females, for example, are placed in "double jeopardy" by the test's minority and gender discrimination. Hispanic females, who score nearly 200 points lower than white males, face triple bias against their language, ethnicity, and gender. In every ethnic and racial group, females score much lower on the SAT than males, as shown in the following table.

Average SAT Scores, 1988

	Females	Males	Difference
Asian/Pacific/American	903	956	53
Black	724	756	32
Mexican American	783	840	57
Native American	805	852	47
Puerto Rican	732	788	56
White	907	965	58

> To adjust for the SAT's biases, some schools add points to women's and minority applicants' scores when they make admission decisions. But this is at best a stopgap measure. The only long-term solution is to either overhaul the SAT to make it fair or stop using it. (Weis, Beckworth and Schaeffer, 1989, p. 18)

Refer to Hillabrant, Romano and Stang (INAR Supplement Volume, Commissioned Paper 2) for a detailed overview of Native student performance on the two most frequently used aptitude tests for college placements; these are the Scholastic Aptitude Test (SAT) and the American College Testing Program (ACT).

At the St. Paul, Minnesota INAR hearing, the superintendent of the Red Lake Independent School District in Minnesota noted that " ... Too often Indian children have succeeded academically in spite of negative and hopeless predictions made by white educators from white achievement tests." Additionally, he cites a Lakota Times newspaper article on a Ford Foundation-sponsored commission finding that "All groups that score lower than whites on standardized tests fare better when judged by their school or job performance. Part of

the reason is that tests are blind to strengths that tests makers do not understand, and thus distort evaluation" (INAR Great Lakes Regional Hearing, pp. 46-47).

Furthermore, the validity and use of standardized tests for any students or teachers is questioned by the broader educational community. Groups such as FairTest are questioning the uses of standardized testing for determining higher education admissions and teacher testing, as well as the public schools' use of these tests as accurate measures of academic performance (FairTest and New York State Public Interest Resource Center, 1990).

Not only in regard to their use as measures of general educational performance indicators have standardized tests been questioned. The INAR hearings also brought out the problem of using standardized tests to assess and diagnose educational problems. Regarding their use in special education programs, Dr. Marilyn Johnson states:

> ... the placement of children is a challenge because the children are assessed with tests designed for a different population. With Indian students, we are mostly dealing with bilingualism or limited English proficiency. We should not have children placed in special education if they do not properly belong there. (INAR Southwest Regional Hearing, p. 35)

Dr. Johnson also presents and discusses some alternatives to currently used measures for special education assessments and placements in Com. Paper 16 of this supplement volume to the INAR report.

Despite the fact that many of these and similar concerns have been voiced in the past, the BIA nevertheless relies heavily on standardized achievement test scores, specifically the California Achievement Test, for assessing their schools' improvement. The most recent (1988) report on BIA-funded schools includes statistics on CAT scores, drop-out rates, attendance, enrollments and school expenditures. It is illuminating to note one Native educator's comments on the appropriateness of relying solely on such statistics:

> ... As a former Bureau of Indian Affairs teacher, I am familiar with the national study the BIA put out in 1988 called *Report on BIA Education: Excellence in Indian Education Through the Effective School Process*. The title of the report is rather misleading. The report has more to do with failures in Indian education than any kind of excellence. It contains page after page of dismal statistics concerning the educational achievement of Indian students, both in BIA schools and public schools. It is full of statistics on high dropout rates, low scores on national standardized tests, and poor academic achievement in colleges, giving one the impression that there are no successful Indian students anywhere.
>
> I am sure the Indian Nations at Risk Task Force will be presented with an abundance of these types of statistics. I am not suggesting that these types of statistics be ignored; that would be foolish. If Indian students are dropping out of high school at a higher rate than other students, then, of course, that is of deep concern for all of us involved in Indian education. What I am suggesting is that you not make these types of statistics so overriding that all else is lost in your report on Indian education. (Robert Perea, INAR Southwest Regional Hearing)

As Native educators have attempted to look at Native student performance, they have relied less on standardized achievement test scores and more on measures of student satisfaction with school, on drop-out rates for example. During the INAR hearings, drop-out rates were the performance measure most consistently cited. It should be noted, however, that one person testifying before the INAR Task Force suggested that we must shift from focusing on negative measures to using more positive perspectives and criteria:

> We must stop thinking of success as reduced drop-out rates and fewer suspensions and start thinking of success as high graduation rates and post-secondary enrollment. (INAR Great Lakes Regional Hearing, p. 36)

D. Current And Potential Systemic Indicators Of Performance

The concern over the use of standardized tests for individual and school assessments is not voiced only by Native educators. There are also efforts in several states to make assessment more authentic and to develop indicators of authentic learning.

The term *authentic work* is used by the National Center on Effective Secondary Schools (NCESS) to characterize tasks which are considered "meaningful, valuable, significant and worthy of one's efforts" (NCESS, 1990). The term encompasses indicators that are culminating performances showing not only what a student has achieved but also the day-to-day activities required to learn and prepare for the performance.

Educators, in general, recognize that current conceptions of curricula and assessment, as well as their interaction, are fundamentally flawed. Curricula are often viewed as sets of information (sets of truths) rather than demonstrable skills; similarly, assessment methods like teacher lecture/ques-

tion techniques, classroom quizzes, and standardized tests rely on a narrow set of information that students are asked to recall and invoke, whole. Both of these conceptions focus primarily on lower rather than higher level thinking skills. Describing the rationale behind NCESS research, Wiggins (1990) notes,

> curricula should be written around essential tasks to be mastered instead of 'doctrines' to be learned...[Furthermore] a verbal and passive view of knowledge leads us to falsely believe that...assessment involves a quasi-secretive after-the-fact sampling of the students' verbalized knowledge of the 'basic' facts, instead of a non-secret process of meeting known standards, while using important and diverse facts. (NCESS, p. 10)

Educational researchers like those at the NCESS view the current problems such as non-*engagement* of students in the classroom as related to the lack of authentic work being required of students:

> Authentic work is not about being tested after the fact...it is about being tested by a standard-revealing and important set of tasks...Most students can produce quality when it is expected; and when tasks, criteria and standards are engaging and demystified. (Wiggins, p. 11)

If these criticisms of current schooling and assessment are true for non-Native students, they are doubly appropriate for Native students whose many tribal/cultural traditions vary from those of mainstream society. As Swisher (1990), in an overview of research into Native students' learning styles notes, among Oglala Sioux, Yaqui and Navajo learners,

> ...observation, self-testing in private, and then demonstration of a task for approval were essential steps in learning and that learning through public mistakes is not a valued method...This style of learning suggests a respect for an individual's ability to learn from their world experientially without constant supervision and correction from another individual. It expresses a certain degree of confidence in the autonomy of the individual to know when performance of a task is ready for public scrutiny. (p. 3)

Swisher, as well as this author, cautions against the positing of a single Native learning style without further investigation, noting that this may further stereotype Native student behavior and "result in practice which is discriminatory or making inappropriate excuses for failure in teaching" (p. 6). While several presentors at the INAR hearings commented on current teachers' ability or desire to teach to Native learning style(s), this author believes that the criticism of current teaching and assessment methods as being unresponsive to different learning styles is equally valid for both non-Native and Native students.

In response to rising criticism about its heavy reliance on the CAT scores, the BIA has started to look at alternative indicators of performance. The BIA's Bureau of Effective Schools Teams (BEST) initiative has developed alternative student performance measures--input as well as output measures--some of which could serve as potential systemic indicators in the evaluation of Native education. The BEST initiative represents a special effort to improve BIA-funded schools. Currently 41 out of 180, or 23 percent, of schools are designated as BEST schools. The Alternative measures include, among others:

- Criterion-referenced tests (or teacher-made tests);
- Portfolios of student progress, e.g., writing samples;
- Non-academic participation (i.e., extra-curricular) rates;
- Attendance rates;
- Increased graduation rates;
- Rates of decreased vandalism by students;
- Increased holding power of a school to keep students and staff;
- Implementation of new curriculum initiatives;
- Increased participation of parents and community members;
- Increases in the variation of extra-curricular activities offered by schools and participated in by students;
- Improvements in staff development programs;
- Implementation of written school improvement plans; and
- Facilities improvements.

While several of these indicators (e.g., performance on criterion-referenced tests) may not easily serve as comparative systemic performance indicators across several schools, certainly others such as increased graduation rates, improved attendance and retention (holding power) rates could easily serve as indicators of performance among different schools serving Native students. With a little more effort, measures such as portfolios of Native student progress, perhaps compared across a sample of schools with Native students, could

also serve as more dependable, appropriate and useful measures of systemic performance.

As the need for more accurate assessments of student learning is acknowledged, potential systemic indicators of performance are being developed nationwide, not only in Native education. For instance, the state of Connecticut (along with six other states -- Michigan, Minnesota, New York, Texas, Vermont and Wisconsin) is involved in developing alternatives to the use of standardized tests in assessing student outcomes. In Connecticut, this effort has required the development of a "Common Core of Learning" for all students in the state, i.e., a comprehensive set of knowledge and traits against which students are individually assessed. The Connecticut model is based on a comprehensive review of reports/recommendations made by several agencies and organizations such as the National Science Foundation, the National Academy of Science, the National Council of Teachers of Mathematics, and the American Association for the Advancement of Sciences. Recognizing that an overreliance on multiple-choice testing focuses on lower level thinking skills such as recall/recognition, the alternatives emphasize "conceptual understandings, multiple representations and connections," among other *mastery* criteria. Students are then performance tested, i.e., they must demonstrate mastery of specific skills. For example, in sciences, students must demonstrate the use of various science apparati (e.g., a triple beam balance, graduated cylinders, a microscope and an electrical circuit) and design and execute a science experiment. In the language arts, students must produce a direct writing sample as well as be able to take notes and use those notes to answer listening comprehension questions in response to tape-recorded messages (Baron, 1989).

Moreover, the National Commission on the Skills of the American Work Force (NCSAWF) has made recommendations regarding assessments specifically for demonstrated mastery of skills and subject areas. Several states are now incorporating or considering the NCSAWF recommendations (*Education Week*, June 20, 1990). These recommendations include the abolishment of the Carnegie unit, which is also among the reforms suggested by some Native educators and others testifying at the INAR hearing. One native educator (Blanchard, 1990) goes so far as to recommend the abolishment of the grade structure.

Clearly, if those individuals involved in Native education (1) examine what the current systemic indicators are telling Native students, parents and teachers, and (2) determine whether this is useful information, we can agree that current systemic indicators, such as standardized tests, absenteeism and drop-out rates are not particularly useful in assessing the actual knowledge, skills and learning processes acquired by Native students. Any plans for further evaluation of Native education must not rely heavily on measures that may sometimes be outdated or inappropriate (such as standardized achievement testing). Rather, the plans must allow for the use of alternative performance indicators such as those used by the BIA's BEST initiative or those being developed by the state of Connecticut and the six other states in the Coalition of Essential Schools.

Much of the testimony from the INAR hearings seem to indicate that current systemic performance measures are not useful. As one INAR Task Force member asks:

> How can we circumvent an evaluation process that measures performance related to tightly specified academic criteria that is not only irrelevant to our children's view of the world, but which documents failure instead of relationships between students and teachers, resources and students, and so on, that contribute to failure? (Hill, *Pedagogy and Self Determination*, INAR ancillary document, 1990)

Stakeholder Groups In Native Education

Native education involves several systems of service providers: federal agencies, state and local public schools, and Native governments. Additionally, each of these systems has categorical distinctions within itself. For example, the federal service providers include (1) the BIA-funded schools, e.g., those operated by the BIA as well as those operated by Native governments; and (2) the various ED programs which interact both with public schools directly (e.g., IEA formula grant projects) and tribes (e.g., vocational education, library services, and IEA adult education projects). Native education involves a complex network of interrelated agencies and responsibilities. Furthermore, these relationships are not unidirectional as they involve several points for input from the consumers of educational services. Also, several other functions involve monitoring the delivery as well as impacts of services.

All of the parties involved in Native education, from providers (e.g., schools, states, federal agencies, Native governments, Elders) to consumers (e.g., Native students, parents and governments) to monitors (e.g., Native parents, and governments, Elders, states) have an interest — a "stake"

in ensuring that their concerns and perspectives are represented in the continuous evaluation of Native education. As noted in the INAR hearings, these stakeholder groups have different evaluation needs in terms of data, and require different procedures and reporting formats to find the evaluation useful or practical.

As primary stakeholders in the evaluation of Native education and as educational services consumers, parents realize the most immediate needs for effective evaluative information. At each INAR regional hearing, and at many of the INAR Joint Issues Sessions at the 1990 National Indian Education Association (NIEA) Annual Conference, Native parents voiced their concerns about the quality of educational services for Native students and the effects/goals of educational institutions.

The remarks made by one parent can be generalized across many others who expressed dissatisfaction about currently used student performance indicators:

> " ...my son was tested with the CTBS test administered through the Bureau, and he scored real low. They told him he had to be retained. He was in sixth grade and couldn't go on to seventh grade. As a parent, they wanted me to sign off on this. Usually the teachers and administrators call parents in to discuss a problem and ask the parent to sign off on a decision without giving the parent an option. Well, I said I didn't want to sign it. I said, "I know my child is better than that." And I said, "The test determines he can't read or write, but I know his potential." And so he therefore went ahead. I promoted him myself. The next year he was an honor student. He had real good grades all year, and I was glad I didn't sign those papers and have him retained. He is going to be graduating this year and is thinking of going to college. (INAR Summary: "Special Session for Students and Elders ..." p. 5)

That same parent felt that (1) many parents were intimidated by schools or (2) school administrators' expectations were low about how parents can assist their children. The same parent also indicated that parents have "common sense and a desire to learn about what their children are learning, and from that base they will begin to help their children get educated and become better prepared."

Evaluation strategies that focus only upon the compilation of statistics detailing the education failure of students to meet some elusive national norm are at best interesting for Native parents, at worst, depressing and debilitating. As noted in a previous section, parents of Native students who attend BIA schools, may receive "report cards" including aggregate school-wide test data on the performance of Native students. However, most of these parents cannot use these data to, as the BIA hopes, make *informed choices about the schools their children should attend.* In many cases, there is in fact no choice, or the choices are even less attractive than the schools in which the students are already enrolled. Parents would rather receive information about why those schools their students do attend fail to raise the students' performance levels. Knowing why schools -- not Native students -- fail would help parents make informed decisions on how to change the schools.

Obversely, parents of Native students in public schools often have problems getting statistical information on Native students as a group from their respective school districts. Thus, they are often unable to tell how Native students, as a group, compare with other students in their schools. Access to data--either aggregated for Native students, or comparative Native and non-Native data--(such as drop-out rates, absenteeism, retention, graduation rates as well as aggregate Native standardized test scores) is critical for determining needs of students eligible for Indian Education Act (IEA) formula grant projects. School districts often cite confidentiality concerns when denying access to these data. However, parents, particularly those that serve on IEA project parent committees, need such data to fulfill their responsibilities. Those observations are made by this author based on ten years experience with IEA projects.

In addition to student performance data, Native parents need information on educational programs that are effective with disadvantaged, low-income, multi-cultural and/or bilingual students, i.e., categories into which many Native students fall. Of course, information specifically on successful Native education programs is needed by Native parents in order for them to replicate and/or then adapt in their own settings.

Throughout the INAR hearings, Native parents and Elders have called for schools to take a lead role in ensuring the survival of Native cultures and languages. Indeed this philosophy reflects the special Native goals added by the INAR Task Force to the national goals for the year 2000. In line with this, any continuous evaluation strategies for Native education should allow for data collection, analyses and reporting on special programs that effectively sustain and develop Native cultures and languages.

Native Elders, as parents and grandparents, expressed their concerns throughout the INAR hearings. These concerns centered around the desire to see the sustenance of Native cultures and

languages as a primary goal of the education of Native students. As a specific stakeholder group, in the continuous evaluation of Native education, the involvement of Native Elders must serve as a touchstone in planning and implementation of future evaluations. Many individuals testifying at the INAR hearings, expressed concern over the realization of the tremendous fragility of Native cultures and languages. Further evaluations in Native education must explore particularly effective programs that nurture the ongoing development of Native cultures and languages. Furthermore, mechanisms for sharing information about these programs must be developed and formalized. Presently, no one source of information, on effective Native culture and language sustenance programs, exists. Coordination efforts among Native governments must be promoted by federal agencies such as BIA as well as by national organizations such as the National Indian Education Association and the National Congress of American Indians. It is hoped that recent Congressional efforts, such as the Native Languages Preservation Act, will facilitate such coordination and development.

Native governments as both providers and consumers of Native education have distinct needs in terms of information that may come out of the continuous evaluation of Native education. Closer coordination between state education agencies and Native governments can lead to the easy retrieval of Native student performance data. However, state and local school districts must first realize their special obligation to Native students. Other commissioned papers (e.g., papers 1, 9, and 20) in this INAR Supplement Volume offer descriptive information on the obstacles put up by states in recognizing this need. Primary among these obstacles is the attitude, based on years of civil rights issues, that Native students are like other minority groups; therefore, to treat Native students differently would lead to charges of discrimination from these other groups. It behooves Native governments and off-reservation Native communities to take the lead in making states realize that the status of Native people is unique. The current efforts in Minnesota can serve as a model for Native governments and communities to use in working with their respective states (*Our Children, Our Future*, Minnesota Indian School Council, 1989).

The needs of other stakeholder groups that represent specific educator subgroups in Native education are well stated in other commissioned papers of this INAR Supplement Volume (e.g., papers 5, 7, 12, 13, 14, 15, 17, 18, and 19). Furthermore, Com. Paper 18 provides insight into how indicators of institutional success and student performance outcomes differ at tribal colleges from those at non-Native institutions of higher education.

Strategies for Continuous Evaluation of Native Education

The federal government has sponsored numerous evaluations, task force studies, policy review reports etc., on the education of Native students, both young and adult. The INAR hearings have generated many statistics on specific programs (in public schools as well as Native-controlled or tribal schools) and their impact on Native students. The state education representatives from several states with large Native populations have reported on their monitoring of Native educational performance. By examining the hearing record data, other information collected by the INAR Task Force, and their own management information systems, the Department of Education and BIA potentially have information to make better informed decisions about the extent of Native education services and more importantly, the quality of services.

To a reasonable degree, decisions about these programs can be based on the past performance of these programs. Some changes in the reporting of outcomes data can assist in judging program performance. As noted by one INAR Task Force member, "... in addition to a drop-out rate for [Native] students that exceeds 65 percent, and a post secondary drop-out rate that is estimated at 75-93 percent, hundreds of students effectively drop-out of school and physically never miss a day ... the statistics are very clear that we can out disadvantage all groups" (Hill, 1990).

It is imperative that strategies be developed to take evaluation of Native education beyond the discrepancy-based evaluation models concerned mostly with the collection of statistics on the lack of Native student achievement (e.g., low standardized achievement test scores). The collection of comparative statistical data on Native students is important to draw some conclusions about how well schools are serving Native students in relation to non-Native students. However, it is important to make certain that these data are valid and appropriate. Certain systemic indicators like dropout and absenteeism rates are likely more valid as measures of the schools' responsiveness to Native students and parents concerns. Comparisons of these indicators across the three categories of school systems (federal, state/local, Native-operated) along with descriptive informa-

tion on why these rates may vary (e.g., different policies, school atmosphere, expectations) can give Native students and parents useful information. The collection of statistical data -- using various measures which can yield comparative information about the performance of Native students relative to that of other groups -- should be an ongoing function of state education agencies and also of NCES.

In terms of data collection for discrepancy evaluation, the TRACKS program in Montana as well as other efforts such as those of the Confederated Tribes of Warm Springs Reservation in Oregon can provide direction to Native educators and federal education officials alike. The Warm Springs model (Sahme, 1990) calls for Native educators to promote the establishment of Indian education standards for all Indian education programs. Noting that BIA has standards for its schools, Sahme calls for tribes to take part in setting standards for the schools they run and to work with public schools to set performance standards and jointly devise methods for achieving these standards. Furthermore, he notes that public schools receiving IEA formula grant funds must be held responsible for also setting long-range goals for meeting standards that would be jointly developed by the Native parent committees and the schools. These standards would be above and beyond the objectives of the funded project, and would extend across the school curriculum and programs. This effort could be coordinated through the seven regional education laboratories in conjunction with the IEA Indian Technical Assistance Centers funded by the Department of Education (Sahme, 1990).

More important in the evaluation of Native education is finding out *what* is working and just as importantly *why* it is working. In the language of the Old-New Paradigm, we must go beyond the big picture of national failure and refocus on snapshots of localized success in order to assess how and why certain approaches work. These snapshots can focus on regional efforts or particular stakeholder group claims, concerns or issues. The Department of Education and BIA must redirect their organizational efforts at increasing the knowledge base in those areas where little research and evaluation has thus far been conducted. For example, we not only need to know the drop-out rates in our schools, but also why some Native students drop out and others don't.

A. The Role of Naturalistic Inquiry

The INAR hearing record clearly demonstrates that the current evaluation models, based mostly on learning deficits, have not and do not serve Native education well, at least in terms of finding solutions to Native education problems. These models only inform us of the tremendously high Native student drop-out rates, the poor performance of Native students on standardized tests, and the ever increasing tardiness and absenteeism among Native students attending either BIA-funded or public schools. One of the most salient drawbacks to these models is that they fail to give us the underlying reasons for these dismal statistics.

Paul (in the INAR Supplement Volume, Commissioned Paper 7) cautions that we must move beyond the hard science paradigm in Native education and move toward an evaluation model which will empower the participants -- in other words, one that "would become a part of the growth and development of the children, families and [schools] within the communities (p. 16)." Charleston (1990) discusses an evaluation framework for the Indian Health Service (IHS) which would assist both the health care providers as well as the health care consumers — i.e., tribes — make better informed decisions. He also presents an emergent paradigm of evaluation, one with the intent of facilitating an understanding of the organization in relation to its environment and the complex network of relationships. This model, based on principles of naturalistic inquiry, could also be adopted to Native education and employed in future evaluations of Native education.

Naturalistic inquiry, or *fourth generation* evaluation, evolved from earlier models of social and educational research. The application of naturalistic inquiry can assist future evaluation of Native education move beyond the clash of evaluation goals -- similar to those documented by House (1980) in regard to the evaluation of three federal evaluation programs in the 1960's and 1970's -- which are present in Native education as documented in the INAR hearings. These distinct goals were referenced in the introduction of this paper, but need reiteration here. Namely, federal goals for Native education (as reflected and implemented by public and BIA schools) are mainly assimilationist and primarily concerned with ensuring the most efficient means of bringing Native students to the performance levels of non-Native students. Hence evaluation strategies have focused on comparisons of Native and non-Native student performance utilizing outcome measures that could be applied across disparate populations. Past evaluations and policy studies have thus been based solely on discrepancy evaluation models, with little or no analysis of the systemic factors

that affect/result in these outcomes. Nor have past evaluations examined Native education as the complex network/system that it is; rather, past evaluations tended to focus on categorical distinctions such as specific federal programs or service agencies.

Native educators and stakeholder groups, on the other hand, see the goals of Native education as being culturally distinct from mainstream society while allowing for simultaneous participation in mainstream society. Native parents want their children to be educated to succeed in school but also to learn in culturally appropriate ways and to sustain/preserve their distinct cultures and languages. For them, evaluation of Native education must not only detail how schools fail their children in reaching the goals of Native people, but also provide information on how they as Native parents, Elders and educators can work to rectify any shortcomings related to educating Native students. Furthermore, from the perspective of Native communities, Native education is a singular but complex web of services, providers, and programs, e.g., BIA and/or public schools, JOM, Title V. This web is a singular whole which cannot be dealt with program by program, since each Native student is impacted by all entities. In short, there are *multiple realities* at work Native education which must be taken into account in evaluation.

The principles of *naturalistic* inquiry, developed by Yvonna Lincoln and Egon Guba, are responsive to the complexity and multiple goals within an organization. If Native education were viewed as a complex organism, then these same principles would certainly meet Paul's call for an "empowerment" model for the continuous evaluation of Native education. Naturalistic evaluation provides information in terms of naturalistic generalizations: for example, like the non-propositional, qualitative information garnished from reading a novel. Naturalistic inquiry uses ordinary language and is aimed at non-technical audiences like teachers or the public. It is based on "informal everyday reasoning" and tries to "understand the everyday world in the experience of those who live it." The case study is an example of naturalistic evaluation (House, 1980, p. 279).

Furthermore, naturalistic evaluation recognizes that there are competing claims, concerns, and issues to be considered which make it necessary to arrive at findings useful to the various groups that have a stake in the evaluation (Charleston, 1990).

Naturalistic inquiry (Guba and Lincoln, 1985) builds upon the work of Schwartz and Ogilvy (1979) which analyzes and reports the emergence of new concepts in a variety of fields and disciplines including physics, chemistry, evolution, mathematics, philosophy, psychology, and educational research. These emerging concepts basically define the world in a much different way than has traditionally been the case. In their analysis, Schwartz and Ogilvy have abstracted seven areas that characterize how these new concepts, in what they call the new or emergent paradigm, differ from the old or dominant paradigm. The previously mentioned Old/New Paradigm ideas regarding political organization and government, represent a special application of this much broader *emergent* paradigm. The seven characteristics of Schwartz and Ogilvy's emergent paradigm, very simplistically stated, are:

(1) Complexity: Reality is diverse, complex and interactive and is becoming increasingly so; therefore, it is impossible to separate out any one thing from it's interactive environment and study it in isolation. Furthermore, systems can't be viewed simply as the sums of their parts; as they become more complex they develop their own unique qualities which cannot be accounted for from their parts.

(2) Heterarchy: Reality or nature, rather than ordered in terms of hierarchy or logical order, is ruled by many interacting (and rapidly shifting) factors. Furthermore, order may only exist in human thinking about the world, and may not in fact be real at all.

(3) Holography: This is the hardest concept to grasp since it is based on metaphor. Simply put, the old concepts of the world were mechanical; the universe (and reality) operated like a clock. The emergent paradigm views reality as more like a hologram. A hologram is an image produced by breaking an image into several patterns of light from several different perspectives. Furthermore, each piece of the holograph can reproduce the whole image if all others are destroyed.

(4) Indeterminacy: The behavior in a mechanical world view can predict the future if all variables are accounted for, i.e., this is a determinant view of reality. The emergent paradigm views the world as indeterminate, i.e., unpredictable; one can never account for all possible variables. The future states of systems are thus unpredictable.

(5) Mutual Causality: The mechanical model of the old paradigm views the world as one where causality is linear. Therefore, in the old paradigm it was important to learn what caused what. On the other hand, in the emergent paradigm, causality is material and evolving; the distinction between cause and effect in a system is meaningless.

(6) Morphogenesis: In the old paradigm, a system was constructed or assembled from parts organized in a knowable plan. In the emergent paradigm, systems are evolving in morphogenetic (organic) ways which are unpredictable and spontaneous under conditions of diversity, openness, and mutual causality.

(7) Perspective: In the old paradigm, objectivity was valued. The emergent paradigm states that objectivity is impossible; e.g., instruments and processes are not neutral, they alter reality. However, in place of subjectivity as the alternative to objectivity, the emergent paradigm suggests perspective as a more useful concept. In evaluation, one cannot be objective, since the observer changes the nature of what is being studied. Rather, one must try to present as many perspectives as possible to ensure that the evaluation is true.

[Recognizing that this is a very simplistic explanation of the very complex concepts underlying the emergent paradigm, this author refers any one interested in this new paradigm to the works of Guba and Lincoln as well as to the original monograph by Schwartz and Ogilvy. Both are cited in the references.]

The emerging way of viewing the world, and approaching evaluation, is more in line with traditional Native beliefs about the world/reality. That is to say, Native peoples view the world as complex, inter-connected in non-linear relationships (heterarchic), dynamic, unknowable (indeterminant), changing/moving in several simultaneous cycles (mutual causality), growing as a whole (morphogenesis) and consisting of many perspectives.

Given the extent to which past evaluations of Native education have relied on old paradigm concepts, it is important to restate how the world of Native education actually is perceived in terms of the emergent paradigm characteristics.

Complexity: Native education cannot be simply described in terms of distinct systems of education (e.g., BIA schools, public schools, federal programs, Native government operated schools). Rather Native education is a complex interrelationship of systems at the national, state/local, and Native community levels. State and local public schools are not isolated systems, but are impacted by various Federal/national initiatives, local constituent concerns, and educational/professional movements. Native education involves all three systems of providers as well as the various Native stakeholder groups served through the systems. Thus, evaluation of Native education can no longer look only at federal policy or programs, or state/local initiatives. In order to be effective, the evaluation of Native education must examine the total *world* of Indian education as a complex system of interrelationships.

Heterarchy: Change and effect in Native education moves not only up and down the spectrum, from the federal level to the local or Native community level, but also responds to other simultaneous factors such as political and educational/professional concerns. The evaluation of Native education cannot focus only on a hierarchical ordering of federal policy and program impacts, but must also take into account these other factors. For example, the local political climate affects how much input Native communities have into local as well as federal initiatives. Similarly, research on how students learn, new national initiatives, the professionalization of Native communities also simultaneously affects how Native education is implemented. Evaluation must take into consideration all of these factors in order to be responsive and valid.

Holographic: Native education involves the multiple realities of many stakeholder groups. A given change in one part of the system, e.g., federal program regulations, will have several different interpretations by different stakeholders. The accuracy of each interpretation is facilitated by the amount of information sharing and interaction among the stakeholders. This sharing and interaction in turn changes the respective perspectives of the stakeholders. Evaluation must take into account these evolving perspectives and changes. There are multiple realities of what constitutes problems and what constitutes appropriate solutions. These multiple perspectives must be taken into account.

Indeterminate: The future of Native education cannot be simply determined; it must be monitored to ensure that all anticipated and unanticipated factors -- inputs, outputs, sideputs -- are regularly accounted for and analyzed in order to assure a true picture of Native education.

Mutual Causality: Native education does not involve a simple push-pull of the various forces and stakeholders involved. Changes in Native educa-

tion involve an interactive and simultaneous movement of influences. Evaluation must describe how these influences interact.

Morphogenesis: As time passes, new educational, technical and administrative solutions arise and are used to address Native education problems. These new solutions can affect the ways in which Native students learn as well as how services are delivered. Berg and Ohler (INAR Supplement Volume, Commissioned Paper 11) present a comprehensive discussion of the possibilities for Native education through accessing and utilizing advanced techniques.

Perspective: The continuous evaluation of Native education should represent the diverse values and points of view of the various stakeholders including the educational concerns of teachers (both Native and non-Native) of Native students, the cultural and social concerns of Native Elders and parents, as well as the political concerns of Native governments, and the efficiency concerns of the various government educational service providers. Decisions are never value free or neutral; thus, decision-making must consider the extent to which the competing values of the various stakeholders groups can be included.

Using the framework of the emergent paradigm offers the various stakeholders involved in Native education a systemic approach to identifying what is not working, determining what does work, and how and why certain approaches to Native education work. The emergent paradigm offers us a view of Native education much more in line with the intergovernmental, multiprogrammatic and culturally diverse realities and conflicting goal orientations of Native education. Instead of viewing the *organism* of Native education as chaotic and unplanned, the paradigm offers us a way of explaining this complex creature.

B. A Model For Continuous Evaluation

It is important to examine how complex organizations like the Department of Education and BIA *really* function in order to see how these functions affect the way research, especially evaluation, are implemented and used. Again in the language of the Old-New Paradigm, we must understand that viewing the evaluation strategies only in terms of classic bureaucratic models (Old Paradigm) only serves to make any potential strategies ineffective. This is to say that by examining only changes in policy, programs and programmatic inputs like appropriations and regulatory mechanisms, we are doing ourselves a disservice.

Naturalistic inquiry or "fourth generation" evaluation presents us with step-by-step strategies for ensuring that the interests of the various Native groups represented at the INAR Task Force are dealt with equitably in future evaluation and research of Native education. These strategies are outlined in capsule form by Guba and Lincoln (1989); the basic components they present are:

1. Identify the full array of stakeholders who have an interest in or will be impacted by the projected evaluation. Some of these have been identified in the previous section, however, the way must be open to the inclusion of any new stakeholders.
2. Elicit from each stakeholder group its concerns and interests regarding the object of the evaluation and the range of claims and issues the group wishes to raise in relation to the evaluation. This process must be open-ended in order to guarantee that it is an insider's view that emerges rather than an outsider's view.
3. Provide a context and a methodology ... through which different perspectives and different claims, concerns, and issues, can be understood, critiqued, and taken into account.
4. Generate consensus with respect to as many perspectives and stakeholder claims, concerns, and issues, as possible. These attempts at gaining consensus should be undertaken within groups ... and between groups.
5. Prepare an agenda for negotiation on items about which there is no, or incomplete, consensus. Failure to reach consensus implies the continuation of competing perspectives, which ... can be changed only through new information or increased sophistication. Because more information may be required than is possible to obtain, given constraints of time and/or resources, the evaluator must devise some means ... for prioritizing the unresolved items. Stakeholder inputs are essential in this determination, lest this need be taken as an opportunity to disempower selected stakeholders.
6. Collect and provide the information called for in the context for negotiation. It cannot be guaranteed that needed information can be provided, but every effort must be made to do so.

7. Establish and mediate a forum of stakeholder representatives in which negotiations can take place. Unresolved differences, as well as resolved claims, concerns, issues, should be reviewed in the light of the new information in the hope that their number can be considerably reduced. Some items will likely remain unresolved, thereby setting the stage for later rounds of evaluation. Outcomes of this step must include definitive actions if the negotiation is to be regarded as successful.
8. Develop a report, probably several reports, that communicates to each stakeholder group any consensus on perspectives and findings and any resolution regarding claims, concerns, and issues that they or other groups have raised.
9. Recycle the evaluation once again to take up still unresolved perspectives and findings and questions and their related claims, concerns, and issues. New aspects may also be explored as they emerge as a result of the first-round evaluation. Fourth generation evaluations are never completed.

Native education is a complex organization, involving several stakeholders -- the many systems of educational service providers and the Native students, parents and Elders served. Each of these stakeholder groups has differing perceptions about the goals of Native education as well as the best ways in which to meet those goals. The emerging paradigm and the fourth generation evaluation model recognize the diversity that the *world* of Native education represents.

Policy making within this world involves several competing goals and priorities. Adaptive program implementation strategies are the most appropriate for organizational systems with conflicting goals and where many stakeholder groups are involved. Within the world of Native education, many adaptive strategies can be brought to bear on creating change. Beaulieu (INAR Supplement Volume, Commissioned Paper 20) presents strategies on how public education can be compelled to be more responsive to Native students needs and the goals of Native education. Similarly, in evaluation, recognition of the disparate goals of Native stakeholders and those who provide for Native education can be accommodated through the use of the naturalistic inquiry or fourth generation strategies. Such evaluation strategies can more accurately reflect the various perspectives and give us a truer and thus, more useful picture of Native education.

Naturalistic evaluation is designed to resolve conflicting claims, concerns and issues and to move stakeholders toward a consensus of critical issues. Naturalistic evaluation methods rely heavily on the collection and dissemination of information as descriptions of experiences related to key claims, concerns and issues relevant to as many stakeholder groups as possible. As noted earlier, the case study approach is an important element of naturalistic evaluation.

Regarding the use of the case study as an evaluation approach particularly appropriate for Native education, this author would suggest that the reader obtain a copy of the Fall 1981 issue of Daedalus: Journal of American Academy of Arts and Sciences. The issue, entitled "America's Schools: Portraits and Perspectives," presents case studies of several different schools representative of (1) the range of schools attended by American students, and (2) particular types of schools serving particular subgroups in American society. Similar descriptive studies of Native education programs, claims and concerns would be a step forward in presenting evaluation as useful to Native stakeholders.

The use of the naturalistic evaluation model would allow for the continuous exchange of information, reactions and responses to the cycles of information dissemination. The process results in awareness of changes, perspectives and movements toward consensus. The INAR hearings have served as one cycle of information gathering; the INAR Final Report and individual commissioned papers in the Supplement Volume serve as an analysis step in another cycle; and the dissemination of the INAR report will serve as another cycle of continuing movement toward resolution of conflicting Native education goals. In the future, the White House Conference on Indian Education can serve as another cycle in the evaluation process. The continuing communication and review of information is critical. The future willingness of the various providers of Native education to be responsive to these perspectives is critical. Perhaps, the INAR report as well as the White House Conference on Indian Education will result in the publication of more research on "what works" in Native education, just as the *A Nation At Risk* report generated several more reports and evaluation efforts.

Conclusions

The many studies that have documented changing policies and programs in Native educa-

tion have had positive impacts albeit in some cases incremental, insufficient or inadequate. The INAR report provides an opportunity for furthering a truly representative Native view of what needs to be done to improve Native education. By directing further evaluation efforts on specific cases of what works and focusing on how and why "it" works, we can ensure that the INAR report is not viewed by Native people as "just another study."

By providing for continuing evaluations that will be able to (1) address a number of stakeholder groups, (2) provide appropriate formats for reporting, and (3) facilitate effective exchange of data and findings among Native Elders, educators, parents, and leaders, we can perhaps begin to form consensus on a new direction for Native education.

(The author wishes to acknowledge Gwen Shunatona and Anne Litchfield for their contribution of ideas and their editorial input and suggestions which greatly facilitated the writing of this document.)

References

Aiken, Lewis R. *Psychological testing and Assessment.* Boston: Allyn and Bacon, Inc., 1979.

Alaska State Senate Report. *Helping Schools Succeed at Helping All Children Learn.* Bob Arnold, Project Director. Alaska: 1989.

Baron, Joan Boykoff, et. al. *Toward a New Generation of Student Outcome Measure: Connecticut's Common Core of Learning Assessment.* Paper presented at American Educational Research Association, Annual Meeting, San Francisco, CA: March 29, 1989.

Blanchard, Rosemary, et.al. *Improving the Effectiveness of Indian Education.* A written statement presented to the INAR Task Force, Southwest Regional Hearing, Phoenix, AZ: September 12, 1990.

Block, Burel, Superintendent of Red Lake Independent School District. Statement presented to the INAR Task Force, Great Lakes Regional Hearing, St. Paul, MN: September 20, 1990: 46-47.

Boyer, Ernest L. *High School: A Report on Secondary Education in America.* New York: Harper & Row Publishers, 1983.

Brescia, William, and Jim C. Fortune. Standardized Testing of American Indian Students. *ERIC Digest: American Indian Education,* March, 1988.

Bureau of Indian Affairs. Report on BIA Education: *Excellence in Indian Education Through the Effective School Process.* Washington, DC: March, 1988.

Charleston, G. Mike. Organizational Structure and Naturalistic Inquiry in the Indian Health Services. *Indian Health Service Handbook, II.* National Evaluation Symposium, Baltimore, MD: October, 1990.

Cronback, L.J. *Designing Evaluation of Educational and Social Programs.* San Francisco: Jossey-Bass. 1982.

Daedalus: Journal of the American Academy of Arts and Sciences. *America's Schools: Portraits and Perspectives.* Fall, 1981.

Department of the Interior. *Goal and Strategy for BIA Education.* Washington, DC: November, 1989.

Educational Testing Service, Office for Minority Education. *An Approach for Identifying And Minimizing Bias in Standardized Tests: A Set of Guidelines.* Princeton, NJ: 1980.

Education Commission of the States. *Indian Education: Policy Recommendations.* Report No. 138, Denver, CO: November, 1980. @Reference = Education Week. "Gardner Proposes Basing Graduation on Standards for Student Performance." Vol. 4, number 39 (June 20,1990).

Education Week. "MacArthur Awards $1.3 Million for National Exams." December 12, 1990.

Education Week. "Group Unveils Plan for National Test for All High School Seniors." February 6, 1991.

Gage, N.L., The Obviousness of Social and Educational Research Results. *Educational Researcher* 20 (January-February, 1991), p. 10-16.

Hill, Norbert. *Pedagogy and Self Determination.* Unpublished speech provided to the INAR Task Force, 1990.

House, Ernest R., *Evaluating with Validity.* Beverly Hills: Sage Publications, 1980.

Indian Nations at Risk: Great Lakes Regional Hearing, St. Paul, MN, September 20, 1990 p. 36. (Testimony and other unpublished documents.)

Indian Nations at Risk: INAR/NACIE Open Discussion with NACIE and Task Force Members, 1990 p. 3. Testimony and other unpublished documents.)

Indian Nations at Risk: INAR/NACIE Joint Issues Sessions, Special Session for Students and Elders to Address the Task Force and NACIE. NIEA 22nd Annual Conference. San Diego, CA: October 16, 1990.

Indian Nations at Risk: Initial Meeting, Washington, D.C., May 14-16, 1990, p. 4. (Testimony and other unpublished documents.)

Indian Nations at Risk: Regional Hearing, Juneau, Alaska, July 16-18, 1990. (Testimony and other unpublished documents.)

Jaeger, Richard M. Ed. *Complementary Methods for Research in Education.* American Educational Research Association, Washington, DC. 1988.

Joint Committee on Standards for Educational Evaluation. *Standards for Evaluation of Educational Programs, Projects and Materials.* New York: McGraw-Hill, 1981.

Johnson, Marilyn. Indian Nations at Risk, Southwest Regional Hearing, Phoenix, AZ, September 12, 1990. (Testimony and other unpublished documents.)

Lincoln, Yvonna S., and Egon G. Guba. *Naturalistic Inquiry.* Newbury Park: Sage Publications, 1985.

Meriam, L. (Ed.) *The Problem of Indian Administration.* Baltimore: Johns Hopkins, 1928.

Minnesota Indian School Council, Presentation to the State of Minnesota 1989 Legislature: *Our Children Our Future.* St. Paul, MN: 1989.

Mississippi Band of Choctaw Indians: *The Choctaw School Study.* Philadelphia, MS: Choctaw Heritage Press, December, 1985.

Mississippi Band of Choctaw Indians: *Choctaw Education.* Philadelphia, MS: Choctaw Heritage Press, December, 1979.

Morrow, Lance. Old Paradigm, New Paradigm. *Time Magazine* (January 14, 1991): 65- 66.

National Advisory Council on Indian Education: 15th Annual Report to the United States Congress, Fiscal Year 1988: *Building from Yesterday to Tomorrow: The Continuing Federal Role in Indian Education.* Washington, DC: March 31, 1989, p. 30.

National Advisory Council on Indian Education: 16th Annual Report to the United States Congress, Fiscal Year 1989: *Educating the American Indian/Alaska Native Family.* Washington, DC: March 31, 1990.

National Center for Educational Statistics: *Dropout Rates in the United States: 1988.* Washington, DC: September, 1989, p. 25.

National Center for Educational Statistics: National Education Longitudinal Study of 1988: *A Profile of the American Eighth Grader.* Washington, DC: June, 1990, p. v, Appendix B5.

National Center for Fair and Open Testing and New York Public Interest Research Group. *Standardized Tests and Our Children.* Cambridge, MA: 1990.

New York Times: "Census Finds Many Claiming New Identity: Indian." March 5, 1991.

Nichols, Richard. *A Closer Look at the USDE Impact Evaluation of IEA.* Unpublished document. ORBIS Associates/NAR, Washington, DC: 1984.

Patton, Michael Q. *Qualitative Evaluation Methods.* Beverly Hills: Sage Publications, 1980.

Patton, Michael Q. *Practical Evaluation.* Newbury Park: 1982.

Perea, Robert. Indian Nations at Risk, Southwest Regional Public Hearing, Phoenix, AZ, September 12, 1990. (Testimony and other unpublished documents.)

Sahme, Sol. Setting a New Course to Guide Indian Education. Written statement presented to INAR Task Force, Northwest Regional Hearing, Seattle, WA: September 5, 1990.

Schwartz, Peter and Ogilvy, James (1980, June). *The Emergent Paradigm: Changing Patterns of Thought and Belief.* Analytical Report 7, Values and Lifestyles Program. Menlo Part, CA: SRI International.

Special Subcommittee on Indian Education, Committee on Labor and Public Welfare: *Indian Education: A National Tragedy-A National Challenge.* Washington, DC: 1969.

Swaney, Ellen. Indian Nations at Risk, High Plains Regional Public Hearing, Billings, MT, August 20, 1990. (Testimony and other unpublished documents.)

Swisher, Karen. *American Indian/Alaskan Native Learning Styles: Research and Practice.* First Working Draft of a monograph for ERIC/CRESS, Charleston, WV: 1991.

Ward, Carol. Indian Nations at Risk, High Plains Regional Public Hearing, Billings, MT, August 20, 1990. (Testimony and other unpublished documents.)

Weis, J., Beckworth, B., and Schaeffer, B. *Standing Up to the SAT.* The National Center for Fair and Open Testing, Inc. *(FairTest)*: 1989.

Weiler, Hans. *Comparative Perspectives on Educational Decentralization: An Exercise in Contradiction.* Educational Evaluation and Policy Analysis, WInter 1990, Vol. 12, No. 4.

Wiggins, Grant. *Authentic Work: Implications for Assessment and School Structures.* Newsletter from National Center on Effective Secondary Schools, Vol. 5, Winter 1990-91.

Yin, Robert K. *Case Study Research: Design and Methods.* Applied Social Research Methods Series, Volume 5. Sage Publications: 1984.

About the Author

Richard Nichols is a member of the Santa Clara Tewa Pueblo in New Mexico. He is Vice

President of ORBIS Associates, an Indian controlled and managed educational research and management consulting organization based in Washington, DC. He has been an Evaluation Specialist at the Indian Education Act -- Indian Technical Assistance Center One serving Indian education projects in 28 states in the eastern region. A corporate officer of ORBIS, he also served as the Project Director on an Evaluation of the Administration for Native Americans Status Clarification Program, and as an Evaluation Specialist on the Evaluation of the American Indian Vocational Rehabilitation Program, both programs administered by the Department of Health of Human Services. In the 1970s, Mr. Nichols was the director of accreditation and director of institutional planning and evaluation for the American Indian Higher Education Consortium, the organization of tribally controlled community colleges.